REMARKS

By this response, claims 36-39 have been cancelled; claims 1, 9, 16, 18, 20, 27, 28, 29 and 33-35 have been amended; and new claims 40-47 have been added, leaving claims 1-35 and 40-47 pending in the application. No new matter has been added by the amendments. Reconsideration and allowance are respectfully requested in view of the following remarks.

Allowable Subject Matter

Applicants gratefully acknowledge the indication in the Office Action that Claims 30 and 34 contain allowable subject matter. For reasons stated below, however, it is respectfully submitted that each of the pending claim is patentable.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claim 27 stands rejected under 35 U.S.C. § 112, first paragraph, for the reasons stated at numbered paragraphs (1) and (2) on page 2 of the Office Action.

As indicated in the Advisory Action, the amendment to claim 27 overcomes this rejection. Withdrawal of the rejection is respectfully requested.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claims 28-35 stand rejected under 35 U.S.C. § 112, second paragraph, for the reasons stated at numbered paragraph (3) on page 2 of the Office Action.

As indicated in the Advisory Action, the amendment to claim 28 overcomes this rejection. Withdrawal of the rejection is respectfully requested.

First Rejection Under 35 U.S.C. § 103

Claims 1-21, 26 and 27 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,543,450 to Takita et al. ("Takita") for the reasons stated at pages 3-4 of the Office Action. The rejection is respectfully traversed.

Claim 1 has been amended to include the features of claim 36 set forth in the Amendment After Final Rejection filed on December 27, 2005. Claim 1 recites a composition for enhancing the arc-tracking and arc-erosion resistance properties of an article consisting essentially of, *inter alia*, "an effective amount of a mixture A, B or C formed from: ... in regard to mixture B, mixture B consisting of at least one of: constituents B1 + B2 where constituent B1 has the meaning of constituent A1 and constituent B2 **is** cerium (IV) oxide and/or hydroxide; and constituents B1 + B3 where constituent B1 has the meaning of constituent A1 and constituent B3 has the meaning of a combination of cerium (IV) oxide and/or hydroxide and titanium oxide TiO_2." According to claim 1, the composition can contain an effective amount of mixture B consisting of constituents B1 + B2 wherein B1 is platinum in the form of a platinum complex or compound, and B2 is cerium (IV) oxide and/or hydroxide. That is, the amount of mixture B in the composition is effective to enhance the arc-tracking and arc-erosion resistance of the article. Applicants submit that Takita does not disclose the composition recited in claim 1.

The Office Action states that Takita teaches a mixture of cerium oxide and a platinum catalyst. Takita's compositions also contain a required azo compound in order to achieve the desired properties of the compositions. See, for example, column 2, lines 52-54, of Takita. To the extent that Takita's mixture of cerium oxide

and a platinum catalyst together with an azo compound has been considered to be "mixture B," claim 1 excludes the azo compound from mixture B.

Takita does not suggest that the silicone rubber compositions can have the required nonflammability properties without the addition of the azo compound to the compositions. During the January 20, 2006 telephone conference between the undersigned and Examiner Moore, Examiner Moore stated that the azo compound is **not** required in Takita's silicone rubber compositions to provide the nonflammability properties, but that the azo compounds are added only to enhance these properties of the compositions. Applicants submit that Takita does not support this position. As indicated in the comparative test results shown in Table 2 of Takita, comparative example 1, which included the platinum additive and cerium oxide, but did **not** include an azo compound, but suffered complete combustion. That is, comparative example 1 had **no** nonflammability properties. Takita does not disclose any example composition that did **not** include an azo compound, but had nonflammability properties. See also column 4, lines 3-4, of Takita. In view of Takita's comparative example 1 combined with the lack of any example composition that did not include an azo compound, but had nonflammability properties, Applicants submit that Takita does not suggest the composition recited in claim 1.

In contrast, the present specification describes examples of the claimed composition that have enhanced arc-tracking and arc-erosion resistance properties, but do **not** contain an azo compound, which is required for Takita's compounds to give them the needed nonflammability properties.

Takita discloses silicone rubber compositions that crosslink via a peroxide catalyst. See the paragraph bridging columns 4 to 5 of Takita. Such peroxide

catalysts cannot be used together with the SiH group-containing component of the claimed composition. Hydrosilylation reactions involve the addition of Si-H bonds to double bonds, such as C=C with a Pt catalyst. Applicants submit that it is well known that the hydrosilylation reactions are sensitive to catalyst poisons, such as N, P, S, Sn and As, which if present in even trace amounts can stop the reaction. As evidence of this fact, Applicants have attached copies of the following documents in the have attached a copy of each of U.S. Patent No. 5,416,147 (see column 1, lines 46-54 and column 1, last line to column 2, line 2); EP 0 604 104 A2 (see page 2, lines 19-22); U.S. Patent No. 6,303,728 (see column 1, lines 47-52) and Hoang Vi Tran, "Materials for Advanced Microlithography: Polymers for 157 nm Lithography and Acid Diffusion Measurements," page 51, second paragraph). As described in Tran, groups that are a good ligand for platinum poison the catalyst because they coordinate more strongly to the platinum center than the olefin.

In view of this well-known problem of catalyst poisoning, Applicants submit that it would not have been obvious to modify Takita's rubber composition that cures via a peroxide catalyst to result in a rubber composition that cures via a hydrosilylation reaction. As good ligands for platinum poison the catalyst, Applicants submit that one skilled in the art would not have been motivated to add to a rubber composition that crosslinks via a hydrosilylation reaction any additive that interferes with this reaction, such as FeO or cerium (IV) oxide, as the reaction is very sensitive to any trace chemical that interferes with platinum.

Accordingly, Applicants respectfully submit that claim 1 would not have been rendered obvious by Takita. Claims 2-15, 26 and 27, which depend from claim 1, also would not have been rendered obvious by Takita for at least the same reasons

as those stated for claim 1. For example, the extinction time value of less than 8 seconds recited in claim 27 is far below the values shown in Table 1 of Takita. Takita does not suggest any composition having the claimed extinction time value, much less that Takita's composition could be optimized to achieve the claimed value and still meet Takita's requirements for the disclosed compositions.

Applicants further submit that the combinations of features recited in independent claims 16, 18 and 20 are also patentable over Takita for at least the same reasons as those discussed above with respect to claim 1. Claims 17 and 19 are also patentable for at least the same reasons as claims 16 and 18, respectively.

Therefore, withdrawal of the rejection is respectfully requested.

Second Rejection Under 35 U.S.C. § 103

Claims 1-25 and 27 stand rejected under 35 U.S.C. § 103(a) over JP 50-97644 ("JP '644") in view of U.S. Patent No. 4,110,300 to Matsushita ("Matsushita") for the reasons stated at numbered paragraph (6) on page 4 of the Office Action. The rejection is respectfully traversed.

JP '644 discloses a self-extinguishing silicone rubber composition. The composition comprises diorganopolysiloxane rubber, reinforcing filler silica, organic peroxide, platinum compound and iron oxide.

Matsushita discloses organopolysiloxane rubber, finely powdered silica, platinum, finely powdered γ-type iron sesquioxide and other metallic additives.

The composition recited in claim 1 can be used to enhance the arc-tracking and arc-erosion resistance properties of an article. As shown in Table 1 at page 27 of the specification, control composition 1, which did not contain mixture A, B or C,

exhibited a high arc-induced weight loss. However, as shown by the results given for Examples 1 and 2, adding a combination of FeO and Fe_2O_3 significantly reduced such weight loss. In addition, the compositions of Examples 1 and 2 exhibited improved flame resistance as compared to control composition 1.

In contrast, neither JP '644 nor Matsushita suggests that both flame resistance and arc-tracking and arc-erosion resistance properties of an article can be enhanced by a composition consisting essentially of an effective amount of mixture A, B or C, and the composition D, as claimed. Neither of these references provides any suggestion that improving the flame resistance of its particular disclosed compositions also results in an improvement in the arc-tracking and arc-erosion resistance properties of those same compositions, much less a significant improvement in the latter properties. As such, Applicants submit that one skilled in the art would not have looked to either of these references in attempting to solve the problems identified and solved by the claimed composition, because these references provide no guidance regarding these problems.

Accordingly, it is respectfully submitted that claims 1-25 and 27 are also patentable over the combination of JP '644 and Matsushita. Therefore, withdrawal of the rejection is respectfully requested. Therefore, withdrawal of the rejection is respectfully requested.

Third Rejection Under 35 U.S.C. § 103

Claims 28, 29, 31 and 32 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 4,699,813 to Cavezzan ("Cavezzan") in view of JP '644 for the reasons

stated at numbered paragraph (7) on pages 4-5 of the Office Action. The rejection is respectfully traversed.

The Examiner acknowledges that Cavezzan fails to disclose or suggest the addition of FeO and Fe_2O_3 to the composition disclosed in Example 6. As such, the Office acknowledges that Cavezzan does not disclose or suggest that "the composition contains an effective amount of d) and f) to enhance the arc-tracking and arc-erosion resistance properties of the article," where "d" is a platinum complex and "f" is a combination of FeO and Fe_2O_3. Claim 28 also recites that "the composition having an extinction time of no more than 8 s, as determined by UL 94V."

Applicants respectfully submit that JP '644 does not suggest modifying Cavezzan's composition to result in the composition recited in claim 28. There is no disclosure or suggestion in Cavezzan that the organopolysiloxane composition should impart arc-tracking and arc-erosion resistance properties to an article comprising the composition. The Examiner's position appears to be that it would have been obvious to add FeO and Fe_2O_3 to **any** known composition for the reason that JP '644 adds these to its silicone rubber composition. However, the Office Action has not established that it would have been desirable to improve the flame resistance of Cavezzan's organopolysiloxane composition. For example, the Office Action has identified no disclosure in Cavezzan that the organopolysiloxane composition is used in an application in which enhanced flame resistance is needed, much less the enhanced arc-tracking and arc-erosion resistance properties and extinction time recited in claim 1. Accordingly, Applicants respectfully submit that the

applied combination of references does not support the alleged *prima facie* obviousness. Thus, claim 28 is patentable over the applied references.

Claims 29, 31 and 32 depend from claim 28 and thus are also patentable. Therefore, withdrawal of the rejection is respectfully requested.

Fourth Rejection Under 35 U.S.C. § 103

Claims 33 and 35 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 5,674,966 to McDermott et al. ("McDermott") in view of JP '644 for the reasons stated at numbered paragraph (7) on pages 4-5 of the Office Action. The rejection is respectfully traversed.

Regarding claim 33, the Examiner acknowledges that McDermott fails to disclose or suggest the addition of FeO and Fe_2O_3 to the composition disclosed in Example 6. As such, the Office acknowledges that McDermott does not disclose or suggest that "the composition contains an effective amount of d) and f)," where "d" is a platinum complex and "f" is a combination of FeO and Fe_2O_3. Claim 33 also recites that "a), b), c), d) and e) form a composition A, and the composition contains 100 parts by weight of the composition A and 5 parts by weight of f)."

Applicants respectfully submit that JP '644 does not suggest modifying McDermott's composition to include FeO and Fe_2O_3, as recited in claim 33. There is no disclosure or suggestion in McDermott that the molding resin should impart arc-tracking and arc-erosion resistance properties to an article comprising them. Applicants submit that the Office Action has not established that it would have been desirable to improve the flame resistance of McDermott's resin. The Office Action has identified no disclosure in McDermott that the resin composition is used in an

application in which enhanced flame resistance is needed, much less the enhanced arc-tracking and arc-erosion resistance properties that are provided by the composition recited in claim 33. Accordingly, Applicants respectfully submit that the applied combination of references does not support the alleged *prima facie* obviousness. Thus, claim 33 is patentable over the applied references.

Claim 35 depends from claim 33 and thus is also patentable. Therefore, withdrawal of the rejection is respectfully requested. Therefore, withdrawal of the rejection is respectfully requested.

New Claims

Claims 40 and 41 depend from claim 1; claims 42 and 45 depend from claim 16; claims 43 and 46 depend from claim 18; and claims 44 and 47 depend from claim 20. These dependent claims are also patentable.

Conclusion

For the foregoing reasons, allowance of the application is respectfully requested. If there are any questions concerning this response, the Examiner is respectfully requested to contact the undersigned at the number given below.

Respectfully submitted,

BUCHANAN INGERSOLL PC (INCLUDING ATTORNEYS FROM BURNS DOANE SWECKER & MATHIS)

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